

APPENDIX 3

Geological and mineralogical description of the examined ore samples

Sample	Location	Sample description	Ore mineralogy	Type of ore deposit	Literature
SPA-1	Špania Dolina, Slovakia	nests and/or disseminated blebs of chalcopyrite and tetrahedrite in light gray quartz rock. Ore with a spotted texture	chalcopyrite, tetrahedrite, pyrite	hydrothermal (meso-temperature) within shear zone	Grecula et al (1995); Michňová and Ozdín (2010); Seikora et al. (2013)
SPA-1r	Špania Dolina, Slovakia	dendritic aggregate of native copper, up to 1.5 cm in diameter	Cu-native	ore deposit formed during weathering, gossan zone	Grecula et al (1995); Michňová and Ozdín (2010); Seikora et al. (2013)
SPA-3	Špania Dolina, Slovakia	pseudomalachite incrustations and small intergrowths in metapsamite	pseudomalachite, chalkophylite, libethenite	ore deposit formed during weathering, leached zone	Grecula et al (1995); Michňová and Ozdín (2010); Seikora et al. (2013)
LUB-1	Lubietová, Slovakia	nests of chalcopyrite and tennantite (up to 3 cm in diameter) in a quartz rock	chalcopyrite, pyrite, tetrahedrite, arsenopyrite	hydrothermal (meso-temperature) within transpression shear zone	Lang (1979); Luptáková et al. (2016)
LUB-1z	Lubietová, Slovakia	pseudomalachite crusts (up to 0,5 cm in thickness) on metapsamite	pseudomalachite	ore formed during weathering processes	Lang (1979); Luptáková et al. (2016)
GE-1	Gelnica, Slovakia	fragment of a siderite-quartz vein with a massive tetrahedrite bands/zones, up to 3 cm in diameter	tetrahedrite	metamorphic-hydrothermal	Hurai et al. (2002); Radvanec et al. (2004)
GE-1A	Gelnica, Slovakia	siderite vein containing aggregates of chalcopyrite and tetrahedrite, up to 1 cm in diameter	chalcopyrite, tetrahedrite	metamorphic-hydrothermal	Hurai et al. (2002); Radvanec et al. (2004)
GE-1z	Gelnica, Slovakia	fine-grained malachite-goethite weathering ore with cavernous texture, small pieces of ore up to 1.5 cm in diameter	malachite, azurite, cuprite	ore formed during weathering, leached zone	Đuđa and Ozdín (2012); Hurai et al. (2002); Radvanec et al. (2004)
SM-1	Smolník, Slovakia	quartz vein with macroscopically visible aggregates that consist of pyrite and chalcopyrite	chalcopyrite, pyrite, sfalerite	volcanogenic massive sulfide ore deposits (VMS type deposit), metamorphosed	Đuđa and Ozdín (2012); Grecula et al. (1995)
SM-2	Smolník, Slovakia	fragment of medium-grained pyrite ore with macroscopically visible clusters of chalcopyrite. Ore with a massive texture	pyrite, chalcopyrite	volcanogenic massive sulfide ore deposits (VMS type deposit), metamorphosed	Đuđa and Ozdín (2012); Grecula et al. (1995)
RB-1	Rudabánya, Hungary	coarse-grained siderite rock with a network of thin tetrahedrite veins	chalcopyrite, tetrahedrite	hydrothermal, meso- to low-temperature ore veins	Szakáll (2001); Németh et al. (2017)
RB-3r	Rudabánya, Hungary	dendritic aggregate of native copper, up to 2 cm in diameter	Cu-native	ore deposit formed during weathering, gossan zone	Szakáll (2001); Németh et al. (2017)
RB-3	Rudabánya, Hungary	fine-grained goethite masses with network of cross-cutting thin veins (up to 0.6 cm in thickness), containing malachite, cuprite and Cu-native	malachite, cuprite, goethite	ore deposit formed during weathering, leached zone	Szakáll (2001); Németh et al. (2017)
BMD-2	Baya Sprie, Romania	fragment of polymetallic ore with a massive texture that fills central part of very thick ore vein, over 50 cm in diameter. On the border with the host rock there is a zone of palisadically placed quartz crystals, with a thickness of up to 2 cm	chalcopyrite, pyrite, sphalerite, galena, tennantite	hydrothermal, low-sulphidation type (genetically associated with porphyry copper deposit type)	Lang (1979); Marcoux et al. (2002)
BM-13	Baya Sprie, Romania	fragment of polymetallic pyrite-chalcopyrite vein with nests (up to 4 cm in diameter) of sphalerite and galena	chalcopyrite, galena, sphalerite, pyrite	hydrothermal, low-sulphidation type (genetically associated with porphyry copper deposit type)	Lang (1979); Marcoux et al. (2002)
Mie-1c	Miedzianka, Poland	chalcocite ore with massive texture	chalcocite, covellite	ore formed during weathering, blanket deposit (supergene enriched zone)	Rubinowski (1971); Balcerzak et al. (1992)
Mie-2	Miedzianka, Poland	fragments of thin calcite-tennantite veins within limestone	tennantite	hydrothermal, low temperature	Rubinowski (1971); Balcerzak et al. (1992)
Mie-7	Miedzianka, Poland	weathering copper ore from leaching zone. The ore consist of malachite and calcite	malachite, azurite	ore formed during weathering, leached zone	Rubinowski (1971); Balcerzak et al. (1992)
RU-1c	Rudna Mine, Poland	Kupferschiefer black shale with macroscopically visible dispersed ore minerals (up to 1 mm)	bornite, chalcopyrite, chalcocite, galena	Kupferschiefer type (from late diagenetic to low-temperature hydrothermal)	Wodzicki and Piestrzyński (1994), Oszczepalski (1999); Kucha (2007)
LE-1c	Leszczyna, Poland	Cu-bearing marls with macroscopically visible aggregates of ore minerals	chalcocite, diurleite, anilite, covellite	Kupferschiefer type (from late diagenetic to low-temperature hydrothermal)	Konstantynowicz (1965)
RJ-1a	Janova Dolina (Volyn), Ukraine	pyroclastic deposits within basaltic trapps, macroscopically visible aggregates of native Cu	Cu-native	postmagmatic, hydrothermal	Shumlyansky et al. (2002); Emetz et al. (2004)